City of Lynchburg

Information Technology Strategic Plan v2.0

FY07 – FY09

*last updated: July, 2006*

**INFORMATION TECHNOLOGY STRATEGIC PLAN**
**FY07 – FY09**

July, 2006

## BACKGROUND and OVERVIEW

In early 2004, the City's Information Technology (IT) Strategic Plan, first published in 2001, was completely re-written. A comprehensive assessment was performed to identify the City's major systems and information technologies that were then in use. Through a process of interviews with City departments, strategic statements of direction were identified, along with associated action plans.

In addition, governance processes were adopted for the evaluation and approval of major technology projects, and a set of principles was adopted to guide the management of and investment in the City's information technologies.

This document serves as an update to the 2004 IT Strategic Plan and is referred to as version two. Much of the 2004 plan remains in place. In this updated version, the City's Leadership Team has reaffirmed the information technology principles (reprinted below), as well as the project governance process. New in this version of the plan is a description of desired outcomes, as adopted by the Leadership Team. Also, key focus areas, goals, and actions have been identified.

The planning horizon for this updated plan is three years, covering fiscal years FY07 through FY09. This plan is not intended to describe every action that will affect the City's information technology investment. Its primary focus is on the "points of intersection," those strategies, actions, and projects that require multiple departments to coordinate and cooperate in the pursuit of advancing the City's effective use of information technology.

July, 2006

**GUIDING PRINCIPLES FOR INFORMATION TECHNOLOGY INVESTMENT**

Shared principles across all City organizations are a necessity for the most effective use of the City's technology resources. Nine fundamental principles are defined to guide the City's information technology initiatives and investment.  These principles closely follow industry best practices and trends.

1. **Every technology initiative will have a defined business need and client sponsor.**

   - All technology initiatives will be driven by business requirements and prioritized according to the business need.

   - Business justifications will determine the technology priorities for the Information Technology Department (IT).

2. **Technology will be shared across departments and applied to common work processes wherever possible.**

   - Technology initiatives will have an enterprise-wide focus when being evaluated, looking for shared applications to reduce redundancy and the inefficient use of resources.

3. **Every technology initiative will be evaluated for its full requirements and costs, covering the full life cycle of the initiative, before a solution is developed and implemented.**

   - The full cost of an initiative, including the requirements for implementation, operations, maintenance, and support will be included when being evaluated.

4. **Common data will be used across departments and shared to the fullest extent possible.**

   - Data will be viewed as an enterprise resource.

   - Data will be captured once and shared wherever needed to reduce costs, redundancy, and duplication of effort.

5. **Custom application development will be minimized.  "Buy" will be the preference versus "build."**

   - Commercial off-the-shelf software, with minimal customization, will be acquired and installed to speed the implementation of new business applications and to minimize application development resource requirements.

   - Business processes will be examined and improvements identified prior to acquiring new applications to obtain the desired functionality with minimal customization.

**PRINCIPLES (cont'd)**

6. **Proven advanced technologies will be pursued.**

   - Technologies that are implemented will reflect emerging trends that meet business requirements, but will also have a proven track record for quality and support.

7. **Proprietary technology solutions will be minimized.  Open architectures and standards will be followed.**

   - Technology solutions will adhere to open standards to facilitate data sharing and system integration, to minimize support costs, and to maintain maximum vendor independence.

8. **Technology initiatives will adhere to city-wide technology standards.**

   - All information technology development and operations will conform to a defined set of standards.

   - Standards will be maintained to minimize costs and to ensure systems interoperability.

9. **Technology projects will be managed using a standard project management methodology.**

   - All projects will have a predefined scope, with milestones and deliverables defined**.**

   - When vendors or contractors are utilized, contract management will be assigned and managed to ensure deliverables are produced within the agreed scope and schedule of the project.

   - All new technology initiatives and investments will be evaluated and managed in accordance with these principles.

July, 2006

**ACCOMPLISHMENTS:  FY04 – FY06**

Many strategies and actions from the FY04 Strategic Plan have been completed.  A brief outline of some of the more significant accomplishments includes:

**Focus Area 2: Governmental Systems**
- Accounts Receivable System was implemented for six bill types.
- Legacy Personal Property Tax system was replaced by a vendor-provided software package.
- Auto decals were eliminated and replaced with a local license fee.
- A strategic GIS evaluation was conducted.
- Parks and Recreation administrative system (Safari) was implemented.
- An Interactive Voice Response (IVR) system was implemented for:
  - Permits and Inspections information (and on website)
  - Job openings
  - Property assessment information.
- Human Services administrative system (Harmony) was implemented.

**Focus Area 3: Technology Policies and Procedures**
- A City-wide governance process for technology project evaluation and approval was implemented.
- A systems development methodology was implemented within the IT department.
- A technology project tracking system was implemented within the IT department.
- A process was implemented to ensure proper security approvals are obtained before granting systems access requests.

**Focus Area 4: Technology Organization**
- A Technology Support Services division was established, including a Help Desk and centralized IT Project Office function.
- Began offering basic Lotus Notes training.

**Focus Areas 5 – 7: Network, Applications, and Security Architectures**
- Wireless access points with integrated security were deployed at several City sites.
- The initial stages of a network directory service (Active Directory) were implemented.
- The renovation and reconfiguration of data center (Carter Glass building) was begun.
- A data center disaster recovery plan was written and a disaster recovery site was established.
- Centralized management of network devices was begun.
- A shared database management environment was implemented.
- A network perimeter security appliance for intrusion, virus, and spam protection was implemented.

## DESIRED OUTCOMES OF THE UPDATED PLAN

The City's Leadership Team discussed and adopted a set of outcomes that are desired to be achieved through the implementation of information technology investments and improvements. These desired outcomes are described below, grouped into three areas: Systems, Support and Processes, and Technology Infrastructure.

### Systems

1. Improve alignment of priorities for systems enhancements, ensuring the projects deemed most important by departments are being worked on first.

2. Increase utilization of existing financial systems (receipt of goods, bill payment, and project accounting) to improve financial processes.

3. Utilize a single Geographic Information System that:

    a. Serves all departments

    b. Is integrated with all City systems

    c. Enables cooperative efforts with Region 2000 and the State.

4. Expand functionality on the City's Internet and Intranet sites to improve efficiency and customer service.

5. Utilize a system or strategy to manage the proliferation of digital documents.

### Support and Processes

1. Develop a shared understanding by all department leaders of a process to follow to acquire and implement a system.

2. Integrate support of public safety systems (Police, Fire, 911).

3. Improve access to technical training resources for all City employees.

4. Increase capability for the initial Help Desk trouble-taker to fix a reported trouble.

5. Reduce instances where it is required for an analyst to be dispatched to fix a problem.

### Infrastructure

1. Deploy a broadband wireless data network for use by the City's mobile workers, both general government and public safety.

2. Improve efficiency and security in administering the City's data network.

3. Improve reliability and reduce risk associated with where and how the City's computing (hardware) resources are deployed.

4. Improve documentation of the City's information technology environments to allow for better decision making.

**THE ACTION PLAN**

The desired outcomes adopted by the City's Leadership Team have been restated as goals to be achieved in the planning period. Specific strategies and actions were also agreed to by the Leadership Team, with the understanding that some strategies and actions are not yet fully estimated concerning financial impact and staffing availability. Regardless, these actions have been included in the plan to communicate to the organization that these are desired directions for the City to pursue, within resource constraints.

The goals, strategies, and actions have been grouped into four focus areas:

**Focus Area 1:**     **Governmental Systems**

**Focus Area 2:**     **Client Service and Support**

**Focus Area 3:**     **Technology Management Processes and Organization**

**Focus Area 4:**     **Technology Infrastructure.**

The goals, strategies, and actions are described in the next section.

July, 2006

## FOCUS AREA 1:  Governmental Systems

| Goal 1: SHARED SYSTEMS -- Deploy shared information technology solutions to address common business processes for use by multiple departments, eliminating systems and data duplication. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Deploy NWS Receipt of Goods and Centralized Accounts Payable – for requisitioning and payment processing. | D. Witt | Low | FY07 |
| 2.  Deploy NWS Project Grant Accounting – for project cost tracking in enterprise funds and other non-CIP projects. | D. Witt | Low | TBD |
| 3.  Acquire and deploy one Document Management System – for managing digital documents not associated with a business application. | M. Goetz | Medium | FY07 |
| 4.  Acquire and implement a work management and asset management system for Utilities and/or Public Works. | T. Mitchell and D. Owen | High | TBD |
| 5.  Form a team to begin to analyze whether we should replace the NWS applications that run on the IBM AS400. | M. Goetz | Low (for analysis) | FY07 |
| 6.  Continue the implementation of Harmony in Social Services, while improving interoperability and integration with State Social Services systems and City financial systems. | M. Johnson | TBD | FY07 |

| Goal 2: GEOGRAPHIC INFORMATION SYSTEM (GIS) -- Deploy one standard Geographic Information System to provide geographic-based data and services to all City departments. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Migrate the GIS system from Intergraph's GeoMedia to ESRI's ArcView, and migrate the database platform from Oracle to Microsoft SQL Server. | L. Newland | High (350K – 500K) | TBD |
| 2.  Integrate the GIS system into as many systems as practical, including CAMA, TrakIT, and Computer Aided Dispatch. | L. Newland | TBD | TBD |
| 3.  Develop and propagate a property Street Name Master database, enhancing the list developed by the Assessor's Office. | G. Daniels and L. Newland | TBD | TBD |

| Goal 3: EGOVERNMENT SERVICES – Enhance the City's websites to improve customer service and operational efficiency. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1. Form a team to determine how to enhance the City's web site, including surveying citizens and businesses, and how to improve the site's usability and effectiveness.  Include in the analysis for potential enhancements:<br><br>• Absorb credit card convenience fees (Comm. Of Revenue (COR), Finance)<br><br>• Take checking account drafts (ACH) for payments (COR, Finance)<br><br>• Take business license applications and renewals online (COR, Community Development) | J. Martin | TBD | FY07 and ongoing |
| 2. Present bill detail to citizens on the City's website for all major bill types. | D. Witt | Medium | FY09 |
| 3. Implement Parks & Recreation registration online. | K. Frazier | Medium | FY07 |
| 4. Implement video streaming of City Council meetings on the website. | J. Martin | Medium | FY07 |

## FOCUS AREA 2:  Client Service and Support

| Goal 1: SERVICE PRIORITIZATION -- Establish and formalize customer-led groups to set project and enhancement priorities for the City's enterprise applications (those with multi-department business owners). | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1 Establish inter-departmental groups to set priorities for shared applications: | | | |
| a. New World Systems (Human Resources and Financial) | J. Matune | Low | FY07 |
| b. TrakIT (Planning, Permitting, Inspections, Code Enforcement, and Business Licensing) | J. Matune | Low | FY07 |
| c. Personal Property Tax System (RBS). | J. Matune | Low | FY07 |
| d. Geographic Information System (GIS). | L. Newland | Low | TBD |

July, 2006

| Goal 2: **HELP DESK SUPPORT** -- Enhance the IT Help Desk function to maximize First Call Resolution of troubles and to provide remote administration of desktop technology, all in an effort to improve customer service. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Equip and train Help Desk staff to be able to fix problems on the first call. | S. Boyers | Low | FY08 |

| Goal 3: **TECHNOLOGY EDUCATION** -- Provide employees with a mechanism for obtaining training on technology currently available within the City. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Develop an online resource center for technology training and assistance. | S. Boyers | Low | FY07 |
| 2.  Provide instructor-led classes for those systems and applications where it is cost-effective. | S. Boyers | Medium | FY09 |

## FOCUS AREA 3: Technology Management Processes and Organization

| Goal 1: **SYSTEMS DEVELOPMENT METHODOLOGY** – Implement a standardized, repeatable process, shared by all departments, for developing and implementing technology solutions. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Train all departmental leaders on their roles in a standard Systems Development Methodology for developing systems. | M. Goetz | Low | FY08 |

July, 2006

## FOCUS AREA 4:  Technology Infrastructure

| Goal 1: SYSTEMS AND NETWORK AVAILABILITY – Establish a computing environment which meets the business needs for availability. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Improve the Data Center (Carter Glass Building) to reinforce the computing and network infrastructure, including backup power, building security, environmental conditioning (heating and cooling), and fire suppression. | M. Goetz | High | FY07 – 08 |
| 2.  Provide adequate disaster recovery resources at the City's recovery site at Public Works building, and conduct periodic tests to ensure the viability of the disaster recovery plan. | M. Goetz | Medium | FY07 |
| 3.  Relocate the IBM iSeries development server (AS400) from the Carter Glass Building to the site at the Public Works building. | M. Goetz | Low | FY08 |
| 4.  Seek to deploy, or contract for, one City-wide wireless data network for field (mobile) workers. | T. Hutchens | High | FY09 |

| Goal 2: ENTERPRISE ARCHITECTURE – Develop a technology architecture which supports integrated, enterprise use of technology services. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1.  Establish one common Directory Service for use by all City applications and departments for user administration, authentication, and authorization. | T. Hutchens | Medium | FY07 |
| 2.  Develop technology architecture reference documentation that serves as the basis for the design and implementation of networking technologies, applications, and databases within the City. | G. Cowden and T. Hutchens | Low | FY07 |

| Goal 3: TECHNOLOGY SECURITY -- Establish information technology security practices that ensure safety and security of information, systems, and networks. | | | |
|---|---|---|---|
| **Strategies and Actions:** | **Leader** | **Cost Impact** | **Time Frame** |
| 1. Deploy one unified software patch management process for all City PC's, including those in Police and 911. | T. Hutchens | Low | FY08 |
| 2. Implement an information security incident response process for use in all City departments and systems. | T. Hutchens | Low | FY07 |
| 3. Conduct periodic information security awareness training for all City employees using City systems. | T. Hutchens | Medium | FY08 |
| 4. Establish a centralized function (process, system, support organization) for building security, including card-key access systems and video surveillance systems. | G. Hart | Medium | TBD |